

WHAT IS CLAIMED IS:

1 1 A method of detecting a disc defect comprising the steps of:
2 writing a first data track to the disc with a write head including a write
3 element and a thermal asperity detector;
4 detecting magnetic defects on the first data track with a certification
5 head; and
6 scanning the first data track for thermal asperities with the thermal
7 asperity detector.

1 2. The method of claim 1, further including the steps of:
2 writing a second data track to the disc;
3 detecting magnetic defects on the second data track; and
4 scanning the second data track for thermal asperities.

1 3. The method of claim 1, further including the step of:
2 upon locating a thermal asperity during the step of scanning, writing a
3 burst pattern to the disc in a location where a thermal asperity is detected wherein the
4 burst pattern is detectable in further analysis of the disc.
5

5

1 4. A method of detecting magnetic and thermal asperities on a disc
2 comprising the steps of:
3 writing a first data stream to a first wide track on the disc with a write
4 head located on a write head;
5 reading the first data stream on a first portion of the first wide track for
6 magnetic defects with a read element located on a certifier head; and
7 scanning the first wide track for thermal asperities with a thermal
8 asperity detector located on the write head.

1 5. The method of claim 4; further including the steps of:
2 writing a second data stream to a second wide track on the disc with
3 the write element;
4 reading the second data stream on a second portion of the second wide
5 track for magnetic defects with the certifier head; and
6 scanning the second wide track for thermal asperities with the thermal
7 asperity detector.

1 6. The method of claim 4, further including the step of:
2 upon locating a thermal asperity during the step of scanning, writing a
3 burst pattern to the disc in a location where a thermal asperity is detected wherein the
4 burst pattern is detectable in further analysis of the disc.

1 7. The method of claim 4, further including the step of :
2 stopping writing of the first data stream on the first wide track while
3 reading the first data stream on a portion of first wide write track.
4

T00290:EE5860

4

1 8. A testing system comprising:
2 a disc drive having a spindle on which a disc can be mounted and
3 motor for rotating the disc; and
4 means for detecting thermal asperities and magnetic defects.

1 9. The testing system of claim 8, wherein the means for detecting thermal
2 asperities is fabricated from magnetic material.

1 10. The testing system of claim 8, wherein the means for detecting thermal
2 asperities is fabricated from nickel.

1 11. The testing system of claim 8, wherein the means for detecting thermal
2 asperities is fabricated from a material picked from a group consisting of nickel,
3 beryllium and nickel-iron.

1 12. The testing system of claim 8, wherein the means for detecting thermal
2 asperities has a width ranging from 10 microns to 100 microns.
3

T002290 EEE5860

13. A testing system for detecting thermal asperities and magnetic defects on a disc comprising:

- a write head including a write element, the write head located on a first support arm wherein the write element is activated to write a track onto the disc during a first period;
- a thermal asperity detector, wherein the asperity detector is activated to detect asperities during a second period; and
- a read head located on a second support arm wherein the read head is positioned to read the track written by the write element.

10

1 14. A testing system for detecting thermal asperities and magnetic defects
2 on a disc comprising:
3 a write head including a write element and a thermal asperity detector,
4 the write head located on a first support arm wherein the write element is activated to
5 write a track onto the disc during a first period and the asperity detector is activated
6 to detect asperities during a second period; and
7 a read head located on a second support arm wherein the read head is
8 positioned to read the track written by the write element.

1 15. The testing system of claim 14 wherein the thermal asperity detector is
2 fabricated from a non-magnetic material.

1 16. The testing system of claim 14 wherein the thermal asperity detector is
2 fabricated from a material picked from a group consisting of nickel, beryllium and
3 nickel-iron.

1 17. The testing system of claim 14 wherein the thermal asperity detector
2 has a width ranging from about 10 microns to 100 microns.

1 18. The testing system of claim 14, wherein the thermal asperity detector is
2 fabricated from nickel.

1 19. The testing system of claim 14, wherein the width of the write head is
2 from about 20 microns to 100 microns.

1 20. The testing system of claim 17, wherein the width of the write head is
2 about 75 microns.

3

